July 2, 1997

FOMC Briefing
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I'll begin with some thoughts on the longer-term strategies section of the bluebook, talk a bit about how the results of those exercises might--or might not--relate to the current situation and finish with proposed changes in the wording of the operational paragraph of the directive.

My take on the modeling exercises will start with chart 2 following page 6 of the bluebook. These simulations are built from the Greenbook forecast and illustrate the basic risk embodied in that forecast. Specifically, that the economy most likely is operating beyond its sustainable potential, and unless the Committee tightens sufficiently at some point, inflation will be on an upward trajectory.

This imbalance has opened up despite a real federal funds rate, shown in the upper right panel, that is at or even above its historical averages. Those historical averages do not factor in the extraordinary contribution of recent financial conditions in supporting spending. In effect, the rise in stock prices and unusually generous provision of credit to many private borrowers, through their effects on wealth and on the cost of funds, are seen as having substantially increased the equilibrium rate. In the staff forecast, narrowing profit margins take their toll on equity prices and credit availability, and fiscal policy continues to be modestly restrictive, reducing the equilibrium

rates. Eventually, a real funds rate around its current level becomes high enough to bring aggregate demand in line with long-run supply. But this happens over a period of years. In the interim, inflation picks up, so that merely avoiding a decline in the real funds rate will require raising the nominal rate--a process the Greenbook assumes gets started in the second half of next year.

If the staff has correctly identified the risks, the question is not whether the funds rate will have to be raised, but only when, by how much, for how long, and what will be the eventual inflation rate. Once an output gap has opened, inflation pressures begin to build, and the sooner action is taken, the less disruptive will be the needed adjustment. At this point, according to the model, holding inflation near its recent levels without incurring a recession--the "stable inflation" strategy--can be accomplished with fairly prompt action and a moderate rise in the nominal funds rate over the next year.

These simulations were done by taking the extended Greenbook forecast and manipulating the federal funds rate to achieve particular outcomes. A more general question concerns the Committee's strategy in responding to actual or expected deviations of output from potential and inflation from its objectives as the economy is subjected to unexpected developments. In particular, we were interested in comparing the consequences of a so-called opportunistic strategy--one that waits for favorable surprises to reduce inflation from moderate levels--to strategies that

deliberately seek lower inflation. To make this comparison, we needed to move away from the Greenbook projections and subject the staff's econometric model to a set of surprises that approximates those that have hit the economy over the last several decades. These are the stochastic simulations in the second part of this bluebook section. We tried to look at two potential issues--getting to price stability, and what happens once you're there.

As to the first issue, the results shown on chart 4 after page 12 address the transition from one steady state with inflation at 2-1/2 percent to another with inflation at 1 percent. The asymmetric responses of an opportunistic policymaker to inflationary and deflationary surprises under these circumstances do guarantee that the long-run inflation goal is eventually achieved. Not surprisingly, it takes considerably longer on average if a policymaker waits for favorable shocks rather than deliberately seeking price stability. In fact, the time to get to price stability under the opportunistic strategy depends on the nature of the shocks hitting the economy--the smaller the shocks, the longer the time. All policies ultimately entail about the same cumulative output loss, but the deliberate policymaker takes that loss earlier, for a shorter time, and in the form of larger output gaps than does the opportunistic policymaker. The model, as we used it, does not differentiate between deliberate and opportunistic policies in terms of the public's understanding of the System's objectives and hence the

credibility of policy. Moreover, it makes no provision for reduced distortions and enhanced efficiencies as inflation falls; presumably the choice between these approaches would rest, in part, on an evaluation of the benefits of achieving price stability sooner under a deliberate strategy relative to the costs of the sharper output losses likely to be involved.

Within the set of deliberate strategies, it is instructive to compare the Henderson-McKibben or target zone policy rules to the Taylor rule. Not only is attention to output gaps entirely consistent with achieving inflation objectives, but placing more weight on such gaps than on the deviations of inflation from its objective, as in the Henderson-McKibben rule, may involve achieving this goal on average with less wrenching adjustments.

Comparing chart 4 with chart 5, which is after page 15, raises the question as to whether strategies need to be adapted once the inflation objective has been reached. This is an important topic--and a full treatment would deal with the potential problems of the zero interest rate constraint, among many other issues. As you can see, given shocks of the nature of those of the last 30 years, there is a substantial probability of measured inflation falling below zero when one is your objective. In this limited exercise, opportunism, which to be sure is usually presented as a transition strategy, fares poorly in the steady state in terms of damping variations in inflation around a

goal. Henderson-McKibben seems to do very well, with its strong responses to inflation and especially output gaps.

But, I should caution, a number of caveats apply to this result, raising questions about whether vigorous policy responses are always advisable in the real world--especially the world you are facing now. First, the parameters of the Henderson-McKibben rule were derived to work well in a model not too dissimilar from the one actually used to generate these simulations. In addition, in using a model--and in particular its steady state--we are assuming that the underlying structure of the economy is known and does not change over time; in the exercises, all the surprises that the economy faces involve the positions of the various functions, not the slopes. The size of the coefficients that govern how the economy responds to monetary policy are known with certainty. As you discussed at your last meeting, some kinds of uncertainty--especially about the response of the economy to policy--do argue for a cautious approach.

Moreover, forceful policy is most appropriate when surprises are in aggregate demand. In such circumstances, output and inflation are moving in the same direction; with no short-run tradeoffs, vigorous policy is stabilizing in every respect. In effect, the staff forecast embodies such a shock, in which unanticipated strength in aggregate demand has pushed the economy past its sustainable potential. Recent favorable inflation outcomes are seen, in part, as the consequence of temporary factors that are likely to dissipate, as Dave Stockton discussed. This

is what gives the payoff we saw in the first set of simulations from prompt policy actions, and would be the rationale for an immediate tightening, as in alternative C.

Such a response might not be appropriate if the surprises are more on the supply side of the economy. Supply shocks do entail tradeoffs, in which policymakers might well choose more restrained actions that take some of the surprise in prices and some in output. Dave's briefing modelled a favorable productivity surprise in which the Committee could realize some combination of lower inflation and higher production. The bluebook showed an exercise in which NAIRU was 4-3/4 percent, and holding the funds rate locked in the current unemployment and inflation rates.

Thus, in formulating policy, differentiating among various types of shocks is essential, but this can be quite difficult as events unfold. Key uncertainties at this time surround the relationship of output to prices--whether or to what extent there has been a favorable shift in the economy's aggregate supply. The combination of an upside surprise to output and shortfall in inflation in the first half of this year does suggest the possibility of a favorable supply shock, rather than a shift in demand.

In these circumstances, the Committee may view recent data as at least justifying maintaining the "wait and see" posture of alternative B to assess the current situation. It may view data on actual prices and the absence of most early signs of pressures

on margins and prices, as increasing the possibility that the economy is not producing appreciably beyond its potential. Moreover, slowing final demand may suggest that the expansion is moderating enough to hold the economy at its present level of resource utilization, limiting any buildup of inflation pressures that may be occurring. Finally, with inflation already quite low, the Committee may see the gains from further disinflation as sufficiently small to take a bit of a chance on the economy being able to sustain the current high operating level.

But, as I noted, identifying the type of shock is problematic in real time. Prices usually lag output, and movements or surprises in prices and economic activity over a relatively short interval--such as the first half of this year--may not be unambiguous indicators of the underlying situation. The size of the decline in the unemployment rate and the degree of strength in output may suggest that at least some of the first-half performance reflected a positive demand surprise that threatens to outpace any lasting upward shift in sustainable supply. Any such increases in long-term supply are likely to occur relatively slowly if they are the result of a pick up in productivity trends that are just becoming visible in the data, or of more flexible product and labor markets.

Consequently, even if the Committee believes the staff has not fully taken into account the implications of the recent good price performance, it may see the risks still as tilted toward higher inflation. If so, at some point it may wish to consider

further tightening, even before it sees convincing evidence of accelerating prices. If demand has overshot potential, as the simulations showed, the longer corrective action is delayed, the more difficult the adjustment is likely to be. So long as the Committee saw this to be a distinct possibility, and the incoming data weren't contradicting this hypothesis, a gradual, occasional firming might be one possible approach, which ensured against cumulating inflation pressures. A view that higher inflation remained the major risk to the economy, and one that was serious enough to potentially warrant Committee action before too long, could be reflected by retaining the asymmetrical language of the directive.

And that brings me to my final subject. The bluebook suggests Committee consideration of the changes in the wording of two sentences in the operational paragraph of the directive, which are shown on page 31. In the first sentence, the alternative would make explicit your expectations for the funds rate--something you now do in public announcements of policy changes. We propose retaining the language that indicates that you work through reserve markets to the federal funds rate, rather than simply giving a funds rate target. This is an accurate description of the process, and avoiding the implication that the Federal Reserve controls the federal funds rate absolutely and directly might be especially helpful if that rate becomes more variable with the drop in reserve balances.

The second suggestion involves the sentence dealing with intermeeting changes in the reserve conditions and the funds rate. No changes are proposed for the preamble of the sentence, which describes the background against which any such decision should be made. But we do give possible alternative wording for the part of the sentence that establishes symmetry or asymmetry. The alternative drops the would/ might and slightly/somewhat distinctions, which the Committee has been making less use of in recent years. In addition, in framing the symmetry/asymmetry language we tried to give a sense of what this might mean in the context of considering an intermeeting policy adjustment. Specifically, it seems to imply something about how incoming information is weighed. For example, an unexpected pickup in consumer prices might be more likely to trigger consideration of action if the Committee were already concerned about the risks that inflation would rise. We recognize that various members interpret this part of the directive differently, that no intermeeting adjustment has been made for some time, and that we may feel a certain kinship with Pandora before the discussion proceeds very far. Indeed, the Committee has lived for some time with the "constructive ambiguity" of the current wording of this sentence, and may prefer to continue in this mode.